



## Klein Electronics, Inc. 2001

a. **Descriptive Title of Invention; "Trinity Series, Hands-Free Kit, Model K1000pi"**. This title refers specifically to a single wire, hands free, audio accessory which contains an In-Line PTT (push-to-talk) button which controls and operates the talk/listen function of the two-way radio function, as well as the send/end telephone function of specific wireless phones. These phones are made only for the iDEN carrier system. In addition to that, we molded a unique connector that enables direct-connection into the base of these phones. Historically, an adaptor has been required for the connection of any audio accessory.

b. **Background of the invention**; Klein Electronics, Inc. has been a manufacturer and distributor of audio accessories for over ten years. More recently, the organization has been involved in the concept and design of many new products. Due to the lack of differentiated and feature specific qualifications in various vertical markets, there has proven to be substantial opportunity to develop and create unique, niche products.

IDEN is a group of products and services offered by Motorola that operate on a dual platform of both cellular and two-way radio. They offer a unique product called "Direct-Connect", which is a digital version of two-way radio communications. In the United States, this service is re-sold to and offered by Nextel Communications and SouthernLINC.

With the combined experiences of audio accessory manufacturing, and a sister corporation that has been an authorized Nextel Dealer since 1997, the president of the Company, Richard Klein, has captured the niche market that was demanding a combined hands-free product with a PTT button incorporated. The

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PTT button was not available anywhere in the world for the iDEN system until made by Klein Electronics, Inc. This one unit has been dubbed our "Trinity Series, Hands-Free Kit, Model K1000pi".

- c. **Brief Summary of Invention:** The "Trinity Series, Hands-Free Kit, Model K1000pi" is an audio accessory which enables hands-free communication, with added features. The unique features and functions appropriating a US Patent are as follows: 1) Single wire, in-line design, with 2) dual-function PTT (push-to-talk) button which operates and controls both the two-way radio and cellular communication commands. Primarily, the two-way radio or "Direct Connect" feature of the iDEN phone systems, as well as the answering of telephone calls, and 3) direct connection into the different phone models via a specially designed and molded connector, which requires no adaptor. Note that the PTT button encases a uniquely designed circuit board that controls the operations discussed herein.

- d. **Brief Description of Drawings (illustration 19):** Illustration 19 is a drawing of the design for the "Trinity Series, Hands-Free Kit, Model K1000pi", and breaks down as follows;

1. earbud (earpiece) houses speaker (listening)
2. single wire connection from earbud to in-line microphone (speaking)
3. single wire connection from microphone to PTT button (controls operation of two-way radio and cellular phone)
4. single wire connection from microphone to device connector (no adaptor required)

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- e. **Detailed Description:** The "Trinity Series, Hands-Free Kit, Model K1000pi" is an audio accessory which combines a highly machined "silver" earpiece, in-line omni-directional microphone, a PTT (push-to-talk) button that controls the operation of both the two-way radio (simplex) and cellular (duplex) communication functions, and a molded connector that secures into select device models, with no adaptor required. Unique details of the device;

1. **PTT (push-to-talk) Button:** The PTT button is the most significant, differentiated feature for this device. This button acts as the send/end feature for any cellular calls, as well as controls the operation of the two-way radio feature (simplex) for iDEN products. These iDEN products have a button on the side of the device, which operates the two-way radio feature. This button provides a simplex communication platform across a specific coverage area. The PTT button on our accessory enables the user to operate this function remotely by simply pressing and releasing the button on our device. This eliminates the need to ever touch the phone itself, as it may be under a uniform or in a vehicle holder and difficult or dangerous to reach for.
2. **One wire;** Historically, hands-free units for two-way radio products have been a split wire, or 2-wire product, whereby one wire leads up to the ear, and the other terminates to the microphone, both meeting down to a connector. Klein Electronics, Inc. combined these features in a single wire application in order to maintain an efficient, easy-to-operate product for the consumer.

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3. Direct Connector; The K1000pi unit is designed and manufactured with ease of operation in mind. Motorola and others that produce products for the iDEN service provide hands-free units that require an audio adaptor, resulting in the required two-piece purchase. We have streamlined this by molding a connector whose function is to lower pricing overall, and ensure the consumer does not lose one of the required pieces to operate the product.

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